

MISCELLANEOUS NOTES

3. Wings of both sexes vestigial.....*Neostylopyga rhombifolia*
Wings of both the sexes well developed or females with pad-like wings.....4
4. Length 30-40 mm ; wings of both sexes well-developed ; pronotum with dark brown patch surrounded by yellowish area.....*Periplaneta americana*
Length 19-25 mm ; wings of male well-developed and of females pad-like ; pronotum without dark brown patch surrounded by yellowish area.....*Shelfordella tartara*
5. Pronotum with two conspicuous longitudinal dark bands.....*Blattella germanica*
Pronotum without longitudinal dark bands but with broad, dark, central area.....*Supella longipalpa*
- Singh and Sohi (1957) listed *Shelfordella tartara* (Suass.) and *Periplaneta americana* (L.) as pests of household in the Punjab. However, in the present studies *Neostylopyga rhombifolia* (Stoll), *Blattella germanica* (L.) and *Supella longipalpa* (F.) are new records for Punjab as household pests. *Polyphaga indica* Walk. occurring outside the houses is also a new record for this region.

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18. RECORD OF *APANTELES OBLIQUAE* WLKN. AND *METEORUS* SP.
(HYMENOPTERA : BRACONIDAE) AS PARASITES OF THE HAIRY
CATERPILLAR *AMSACTA MOOREI* BUTL. (LEPIDOPTERA : ARCTIIDAE)

The caterpillars of the moth *Amsacta moorei* Butl. defoliating bean plant, *Phaseolus acontifolius* Jack. in Mehrawal village in Aligarh district were collected during June 1978 and reared in the laboratory. The observations revealed that two braconid species namely, *Apanteles obliquae* Wlkn. and *Meteorus* sp. (probably undescribed) parasitise the caterpillars.

In India the caterpillars of *Amsacta albistriga* and *A. moorei* have been reported to be parasitised by the braconids *Apanteles creatonit*, *A. bosei* and *A. flavipes* (David and Kumaraswami 1978). Therefore, this appears to be

first record of *A. obliquae* and *Meteorus* sp. on *A. moorei*.

Out of 560 caterpillars collected and observed, 169 were parasitised by these two parasites showing a parasitisation of 30.8 per cent. The parasitisation due to *A. obliquae* was 17.5 per cent and the rest by *Meteorus* sp.

Meteorus sp. is a solitary endoparasite. It forms brownish cocoon outside near the head. The mature cream-coloured grub measures 4.2 to 5.1 mm long and 1.45 to 1.75 mm wide. The cocoon measures 4.2 to 5.3 mm long and 1.65 to 2.15 mm wide.

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REFERENCE

DAVID, B. V. AND KUMARASWAMI, T. (1978) : Elements of Economic Entomology Popular Book Depot, Madras-600 015, pp. 514.

19. NEW RECORD OF *MELANAGROMYZA PROVECTA* (DE MEIJERE) (AGROMYZIDAE : DIPTERA) ON SAFFLOWER FROM PUNJAB, INDIA

Safflower (*Carthamus tinctorius* Linn.) is one of the important oil seed crops. The Carthamine dye is extracted from its flowers and oil is obtained from the seeds. Rai (1976)¹ listed twenty-two insect pests of safflower from India. This list includes *Melanagromyza obtusa* (Malloch).

The wilting of safflower plants were noticed during the winter 1978-79, at the Punjab Agriculture University, Ludhiana, caused by the feeding of agromyzid maggots on the tap root. The pupae were collected from the roots of the attacked plants and reared in the laboratory in glass jars. The adults were identified as

Melanagromyza provecta (de Meijere). The occurrence of this agromyzid on safflower in India is a new record.

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¹ Rai, B. K. (1976) : Pests of oilseed crops in India and their control. I.C.A.R. Bull. pp. 88-97.